

MORBIDITY AND MORTALITY WEEKLY REPORT

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Perspectives in Disease Prevention and Health Promotion

State and Local Influenza Immunization Program Activities

Influenza prevention and control efforts in the United States have relied on cooperation between federal, state, and local public health agencies and private sector providers. Since the 1979–80 influenza season, public sector resources for influenza control have been provided primarily by state and local health agencies.

Between the 1985–86 and 1986–87 influenza seasons, the number of state and local projects offering influenza vaccine increased markedly. During the 1985–86 influenza season, 20 of 63 federal immunization grant-supported localities reported purchasing approximately 1,710,024 doses of influenza vaccine for use in public clinics. During the 1986–87 influenza season, 36 localities reported purchasing 2,179,485 doses of influenza vaccine. Compared with the previous year, the activities in 1986–87 represented increases of 80% in project participation and 27% in the number of doses purchased.

Programs in Allegheny County, Pennsylvania, and in California and Vermont illustrate state and local efforts to improve influenza vaccine coverage.

Allegheny County, Pennsylvania. During the 1986–87 influenza season, the Allegheny County Health Department conducted expanded outreach clinics to immunize high-risk persons against influenza. Of the 10,200 persons residing in nursing home facilities, 8529 (84%) received vaccine provided by the health department. Previous immunization coverage levels in Allegheny County nursing homes ranged from a low of 36% in the 1979–80 influenza season to a high of 71% during the 1985–86 season. An additional 43,926 doses were administered in health department clinics, hospital outpatient departments, community clinics, and senior citizen facilities. An estimated 21% of the 210,000 persons ≥ 65 years of age who were not in long-term-care facilities received publicly purchased vaccine. Allegheny County coordinated the development of a coalition involving the American Lung Association (ALA) of Western Pennsylvania and other health-care organizations that conducted surveys to measure the impact of and coverage levels for their programs. A telephone survey conducted by the ALA at the conclusion of the 1986–87 influenza season showed overall influenza vaccination rates of 32% in noninstitutionalized persons aged ≥ 65 years in the general population. The ALA publicized the recommendations and distributed educational material to high-risk groups (1).

Influenza Immunization — Continued

California. The State of California, through the California Department of Health Services (CDHS), distributed over 481,000 doses of influenza vaccine, of which over 350,000 doses were administered to approximately 12% of California residents ≥ 65 years of age. This program, in operation since 1974, is funded entirely through state general revenue funds. The CDHS distributes vaccine to 59 county and municipal health departments. Fees up to \$2.00 may be charged by local units to defray administrative costs. Vaccine is offered at clinics to all persons ≥ 55 years of age and to persons of any age with certain chronic illnesses. Staff for outreach clinics and nursing home programs is provided jointly by California chapters of the American Red Cross and state and local health departments.

Vermont. The Vermont Department of Health receives a yearly grant from Blue Cross/Blue Shield of Vermont to support the purchase of influenza vaccine for an immunization program for persons ≥ 60 years of age and persons of all ages with high-risk conditions. Vaccine is distributed to home health agencies and visiting nurse associations that provide staffing and clinic coordination. Area Offices on Aging provide additional coordination and publicity through a newsletter distributed to senior citizens of Vermont. During the 1987–88 influenza season, approximately 11,000 persons received influenza vaccine through this program.

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Editorial Note: Older persons and those with certain chronic health problems are at increased risk for complications of influenza infection. Target groups for influenza immunization include children and adults with cardiopulmonary or renal disease, metabolic diseases (including diabetes mellitus), severe anemia, or compromised immune function; residents of chronic-care facilities; health-care professionals caring for high-risk patients; and household contacts of high-risk persons (2).

As many as 50,000 excess deaths are caused by influenza in the United States during epidemic years. Although influenza vaccine can substantially reduce influenza-associated morbidity and mortality, only about 20% of high-risk persons are immunized annually. To increase coverage, many state and local health departments have collaborated with private sector groups to develop special influenza vaccination programs such as those reported above. In addition, in October 1988, CDC, in collaboration with the Health Care Financing Administration, awarded demonstration grant funds to nine programs to assess the cost effectiveness of furnishing influenza vaccine to Medicare part B beneficiaries.

In the hospital setting, influenza vaccine should be offered to high-risk persons between September and February (2). Although other organized vaccination campaigns for high-risk persons are optimally undertaken in November, health-care providers should make every effort to ensure that high-risk persons are immunized during routine health-care contacts during the fall and early winter. Studies suggest that at least 40%–55% of persons who are at high risk or who died of influenza and pneumonia may have received care in a health-care institution during the previous year; at least 75% of these persons have attended outpatient clinics but failed to receive influenza vaccine when vaccines should have been routinely available (2–4). Recognizing these missed opportunities is important in improving coverage levels in high-risk groups.

Influenza Immunization — Continued

Because of its substantial health impact, influenza is one of the most important vaccine-preventable diseases of adults. All providers of health care to adults should take every opportunity to review the immunization status of patients and, when indicated, offer their patients influenza vaccine and other vaccines (pneumococcal, tetanus/diphtheria toxoids, measles-mumps-rubella, and hepatitis B) appropriate for adults.

References

1. CDC. Allegheny County 1986-87 influenza vaccination program—Pittsburgh, Pennsylvania. MMWR 1987;36:617-9.
2. ACIP. Prevention and control of influenza. MMWR 1988;37:361-4,369-73.
3. Barker WH, Mullooly JP. Pneumonia and influenza deaths during epidemics: implications for prevention. Arch Intern Med 1982;142:85-9.
4. Williams WW, Hickson MA, Kane MA, et al. Immunization policies and vaccine coverage among adults: the risk of missed opportunities. Ann Intern Med 1988;108:616-25.

Notice to Readers

**Availability of the CDC/NIH Manual,
*Biosafety in Microbiological and Biomedical Laboratories***

The second edition of *Biosafety in the Microbiological and Biomedical Laboratories* is now available.

This document was developed jointly by CDC and the National Institutes of Health in 1984 to help define the principles of biosafety and to provide guidelines for implementing them in the research laboratory. It outlines standard and special microbiologic practices, safety equipment, and facilities that constitute four biosafety levels. Recommended safe microbiologic techniques are described in detail for special infectious agents through the use of agent summary statements. The 1988 edition is identical in content but has added the *Agent Summary Statement for Human Immunodeficiency Virus and Report on Laboratory-Acquired Infection with Human Immunodeficiency Virus (1)* to the information in the first edition.

Requests from academic institutions and private laboratories for single copies should be directed to NIH/DS, 31-1C02, Bethesda, MD, 20892. Copies for other institutions or multiple copies may be obtained for \$3.75 per copy (stock no. 107-040-000508-3) from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

Reference

1. CDC. 1988 agent summary statement for human immunodeficiency virus and report on laboratory-acquired infection with human immunodeficiency virus. MMWR 1988;37(suppl S-4).

Influenza Immunization - Continued

Erratum: Vol. 37, No. 45

p. 691 In the article, "State-Specific Estimates of Smoking-Attributable Mortality and Years of Potential Life Lost - United States, 1985," the two numbers in parentheses in item 3 of the last paragraph are reversed. This item should read: "deaths among nonsmokers caused by passive smoking (3825) and deaths from cigarette-caused fires (1570) were included in the previous estimate. . . ." Also, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources, should be added to the credits.

TABLE I. Summary - cases of specified notifiable diseases, United States

Disease	46th Week Ending			Cumulative, 46th Week Ending		
	Nov. 19, 1988	Nov. 21, 1987	Median 1983-1987	Nov. 19, 1988	Nov. 21, 1987	Median 1983-1987
Acquired Immunodeficiency Syndrome (AIDS)	515	U*	117	27,144	17,979	6,963
Aseptic meningitis	145	184	231	5,960	10,222	9,627
Encephalitis: Primary (arthropod-borne & unspc)	17	24	24	689	1,169	1,189
Gonorrhea: Post-infectious	2	2	-	110	92	95
Civilian	12,170	12,086	16,982	614,015	683,442	786,295
Military	165	573	403	10,316	14,682	18,702
Hepatitis: Type A	629	387	439	22,860	21,724	20,174
Type B	466	511	483	19,803	22,479	22,841
Non A, Non B	44	39	64	2,216	2,623	3,143
Unspecified	69	44	77	2,027	2,754	4,526
Legionellosis	37	25	18	859	861	669
Leprosy	7	-	5	150	176	215
Malaria	19	13	19	892	909	894
Measles: Total†	42	17	5	2,639	3,523	2,664
Indigenous	39	16	5	2,374	3,105	2,235
Imported	3	1	1	265	418	303
Meningococcal infections	52	65	45	2,496	2,587	2,377
Mumps	111	185	49	4,081	11,521	2,928
Pertussis	65	41	37	2,495	2,244	2,244
Rubella (German measles)	2	2	8	187	321	594
Syphilis (Primary & Secondary): Civilian	742	619	511	35,679	31,323	24,696
Military	1	3	3	142	144	146
Toxic Shock syndrome	5	8	7	307	300	333
Tuberculosis	439	423	415	18,719	18,853	18,853
Tularemia	4	1	6	169	183	183
Typhoid Fever	18	7	7	345	301	336
Typhus fever, tick-borne (RMSF)	5	7	7	591	581	720
Rabies, animal	104	68	83	3,837	4,194	4,847

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1988		Cum. 1988
Anthrax	-	Leptospirosis	41
Botulism: Foodborne (Colo. 1)	26	Plague	14
Infant	31	Poliomyelitis, Paralytic	1
Other	3	Psittacosis (Mo. 1, Calif. 1)	78
Brucellosis	58	Rabies, human	-
Cholera	6	Tetanus	48
Congenital rubella syndrome	4	Trichinosis (Mich. 1)	40
Congenital syphilis, ages < 1 year	426		
Diphtheria	-		

*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.

†There were no cases of internationally imported measles reported for this week.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 19, 1988 and November 21, 1987 (46th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA, NB	Unspecified		
	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	27,144	5,960	689	110	614,015	683,442	22,860	19,803	2,216	2,027	859	180
NEW ENGLAND	1,183	375	24	4	19,221	21,186	754	1,037	111	85	49	15
Maine	26	19	2	-	352	608	18	50	5	1	4	-
N.H.	36	40	1	3	230	355	42	66	10	4	4	-
Vt.	10	27	7	-	107	201	14	39	6	4	5	-
Mass.	660	155	8	1	6,459	7,431	383	647	71	61	33	14
R.I.	78	81	-	-	1,796	1,934	80	75	11	-	3	1
Conn.	364	53	6	-	10,277	10,657	237	180	8	15	-	-
MID. ATLANTIC	9,124	643	52	4	95,817	107,456	1,731	2,840	167	281	200	8
Upstate N.Y.	1,184	347	33	1	14,006	15,606	680	981	66	19	75	-
N.Y. City	5,069	123	8	3	39,700	57,028	320	1,193	18	205	46	7
N.J.	2,152	61	11	-	13,817	14,703	393	650	57	41	40	1
Pa.	719	112	-	-	28,284	20,119	338	316	28	16	40	-
E.N. CENTRAL	1,940	895	180	13	104,279	104,686	1,499	2,095	194	112	200	5
Ohio	441	380	61	3	23,629	23,411	298	488	32	19	79	-
Ind.	80	92	27	-	8,002	8,287	148	304	19	24	28	-
Ill.	898	92	32	10	31,334	30,486	481	447	68	29	-	4
Mich.	417	374	43	-	33,267	33,392	364	617	51	37	55	-
Wis.	104	47	17	-	8,047	9,110	208	239	24	3	38	1
W.N. CENTRAL	668	245	52	11	26,339	27,758	1,250	897	96	31	72	1
Minn.	146	29	11	3	3,535	4,138	90	119	19	3	4	-
Iowa	39	35	9	3	1,946	2,715	43	77	13	2	18	-
Mo.	350	99	1	-	15,153	14,722	756	537	44	16	21	-
N. Dak.	4	5	4	-	163	261	6	12	3	5	1	-
S. Dak.	7	18	5	-	444	549	26	4	3	-	14	-
Nebr.	33	11	12	2	1,383	1,802	46	40	2	-	5	-
Kans.	89	48	10	1	3,715	3,571	283	108	12	5	9	1
S. ATLANTIC	4,704	1,279	102	40	173,430	179,455	2,130	4,134	347	300	133	1
Del.	62	42	3	-	2,701	3,061	44	128	7	4	13	-
Md.	497	187	9	3	18,040	20,489	266	623	38	25	18	1
D.C.	433	19	1	1	13,132	11,892	16	42	3	1	1	-
Va.	328	181	32	4	12,677	13,121	339	301	72	198	11	-
W. Va.	16	35	22	-	1,217	1,273	14	65	5	-	-	-
N.C.	249	157	21	-	24,535	26,442	291	745	84	-	31	-
S.C.	166	21	-	1	13,799	14,087	40	478	12	5	26	-
Ga.	689	142	1	2	32,741	32,055	580	601	13	6	21	-
Fla.	2,284	495	13	29	54,588	57,055	580	1,153	113	57	12	-
E.S. CENTRAL	667	406	60	8	49,085	51,711	698	1,289	169	13	47	2
Ky.	85	141	20	1	4,943	5,206	461	255	69	2	20	-
Tenn.	293	48	15	-	17,029	18,157	152	570	40	-	8	-
Ala.	185	184	25	2	14,774	16,232	52	330	59	10	13	2
Miss.	104	53	-	5	12,339	12,076	33	114	11	1	6	-
W.S. CENTRAL	2,324	724	82	3	66,278	77,510	2,827	1,822	192	495	25	31
Ark.	75	14	5	-	6,803	8,730	307	99	5	17	4	-
La.	318	116	23	1	13,188	13,054	147	317	25	16	7	1
Okla.	127	68	8	-	6,278	8,349	454	180	42	27	14	-
Tex.	1,804	526	46	2	40,209	47,377	1,919	1,246	120	435	-	30
MOUNTAIN	791	213	26	3	13,113	17,870	3,030	1,483	227	162	44	1
Mont.	11	4	-	-	372	494	38	52	10	7	4	-
Idaho	10	1	-	-	301	621	122	100	7	-	-	-
Wyo.	6	2	-	-	180	389	5	12	3	-	-	-
Colo.	281	69	3	-	2,905	4,050	207	178	63	73	8	1
N. Mex.	49	22	3	1	1,307	1,961	493	215	18	1	4	-
Ariz.	281	73	11	1	4,754	6,042	1,673	577	68	53	19	-
Utah	58	25	4	1	480	552	281	128	37	18	3	-
Nev.	115	17	5	-	2,814	3,761	210	203	21	9	5	-
PACIFIC	5,763	1,080	111	24	66,453	95,810	8,941	4,246	713	548	89	86
Wash.	342	-	7	4	6,184	8,025	2,042	772	177	60	21	7
Oreg.	163	-	-	-	2,915	3,804	1,216	520	77	21	4	1
Calif.	5,145	963	99	20	55,893	81,918	5,146	2,855	446	446	61	66
Alaska	16	25	3	-	936	1,516	525	49	8	7	-	1
Hawaii	97	102	2	-	535	747	12	50	5	5	3	11
Guam	1	-	-	-	122	179	9	13	-	2	1	5
P.R.	1,230	89	4	1	1,145	1,743	51	240	41	40	-	3
V.I.	32	-	-	-	365	253	1	7	2	-	-	-
Amer. Samoa	-	-	-	-	65	74	3	2	-	5	-	2
C.N.M.I.	-	-	-	-	39	-	1	3	-	4	-	1

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 19, 1988 and November 21, 1987 (46th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningo- coccal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
		Cum. 1988	1988	Cum. 1988	1988	Cum. 1988		Cum. 1987	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	1988
UNITED STATES	892	39	2,374	3	265	3,523	2,496	111	4,081	66	2,495	2,244	2	187	321
NEW ENGLAND	67	-	83	2	54	280	215	-	117	1	175	150	-	9	1
Maine	3	-	7	-	-	3	10	-	-	-	24	28	-	-	1
N.H.	3	-	67	-	44	162	23	-	105	-	47	39	-	5	-
Vt.	4	-	-	-	-	26	16	-	5	-	4	4	-	-	-
Mass.	33	-	2	-	2	65	94	-	7	-	60	50	-	3	-
R.I.	6	-	-	-	-	2	21	-	-	-	17	3	-	1	-
Conn.	18	-	7	25	8	22	61	-	-	1	23	26	-	-	-
MID. ATLANTIC	158	30	893	-	49	582	263	16	340	17	194	268	-	14	12
Upstate N.Y.	38	-	19	-	18	40	124	-	96	9	112	164	-	2	10
N.Y. City	86	-	48	-	6	463	64	-	101	1	6	13	-	7	1
N.J.	11	30	299	-	11	39	63	9	53	7	15	17	-	3	1
Pa.	23	-	529	-	14	40	12	7	90	-	61	84	-	2	-
E.N. CENTRAL	47	-	141	-	57	374	346	7	806	1	234	252	-	31	36
Ohio	11	-	2	-	32	5	126	-	113	-	49	74	-	1	-
Ind.	4	-	57	-	-	-	28	1	73	1	74	17	-	-	-
Ill.	2	-	56	-	16	194	74	2	296	-	44	16	-	26	27
Mich.	23	-	26	-	5	29	80	4	210	-	34	46	-	4	9
Wis.	7	-	-	-	4	146	40	-	115	-	33	99	-	-	2
W.N. CENTRAL	18	-	11	1	3	230	91	37	192	1	124	134	-	2	2
Minn.	6	-	10	-	1	39	19	-	-	-	49	13	-	-	-
Iowa	2	-	-	15	1	-	-	-	34	1	30	57	-	-	1
Mo.	6	-	1	-	1	189	34	2	40	-	22	33	-	-	-
N. Dak.	-	-	-	-	-	1	1	-	-	-	11	12	-	-	-
S. Dak.	-	-	-	-	-	-	4	-	1	-	5	3	-	-	-
Nebr.	1	-	-	-	-	-	12	-	11	-	-	1	-	-	-
Kans.	3	-	-	-	-	1	21	35	106	-	7	15	-	2	1
S. ATLANTIC	115	4	384	-	22	166	431	9	665	3	239	301	1	18	19
Del.	1	-	-	-	-	32	2	1	1	-	7	5	-	-	2
Md.	20	-	11	-	5	7	52	-	129	1	46	18	-	1	3
D.C.	12	-	-	-	-	1	8	5	264	-	1	-	-	-	1
Va.	20	3	207	-	2	1	51	2	136	2	23	50	-	11	1
W. Va.	3	-	6	-	-	-	7	1	17	-	8	39	-	-	-
N.C.	13	-	-	-	5	6	66	-	51	-	66	119	1	1	1
S.C.	10	-	-	-	-	2	36	-	6	-	1	-	-	-	-
Ga.	5	-	-	-	-	9	68	-	29	-	36	23	-	2	2
Fla.	31	1	160	-	10	108	141	-	32	-	52	47	-	3	9
E.S. CENTRAL	19	-	70	-	-	6	238	2	439	1	100	48	-	2	3
Ky.	-	-	36	-	-	-	53	2	210	-	12	2	-	-	2
Tenn.	-	-	1	-	-	-	130	-	211	-	29	15	-	2	1
Ala.	10	-	-	-	-	4	40	-	15	1	55	24	-	-	-
Miss.	9	-	34	-	-	2	15	N	N	-	4	7	-	-	-
W.S. CENTRAL	78	-	14	-	3	448	167	19	789	3	263	274	-	11	11
Ark.	4	-	-	-	1	-	20	11	116	2	26	12	-	4	2
La.	12	-	-	-	-	-	47	2	286	1	18	49	-	-	-
Okla.	10	-	8	-	-	4	19	-	197	-	62	162	-	1	5
Tex.	52	-	6	-	2	444	81	6	188	-	98	51	-	6	4
MOUNTAIN	42	-	117	-	30	496	74	11	203	30	740	193	-	6	25
Mont.	5	-	5	-	28	128	2	-	2	-	2	6	-	-	8
Idaho	2	-	-	-	1	-	8	-	4	3	323	62	-	-	1
Wyo.	-	-	-	-	-	2	-	-	3	-	2	5	-	-	1
Colo.	14	-	112	-	1	9	18	2	33	-	29	66	-	2	-
N. Mex.	2	-	-	-	-	317	11	N	N	-	51	12	-	-	-
Ariz.	13	-	-	-	-	36	18	8	137	27	306	33	-	-	5
Utah	4	-	-	-	-	1	15	-	7	-	26	10	-	3	10
Nev.	2	-	-	-	-	3	2	1	17	-	1	-	-	1	-
PACIFIC	348	5	661	-	47	941	621	10	530	8	496	624	1	94	210
Wash.	22	-	7	-	-	44	62	2	52	3	110	83	-	-	2
Oreg.	16	-	6	-	2	100	41	N	N	-	46	70	-	-	2
Calif.	297	5	644	-	37	792	545	8	438	5	265	220	1	66	134
Alaska	3	-	1	-	-	1	6	-	13	-	7	6	-	-	2
Hawaii	10	-	3	-	8	4	17	-	16	-	58	235	-	28	70
Guam	-	-	-	-	1	2	-	-	2	-	-	-	-	1	1
P.R.	2	-	226	-	-	771	11	-	10	-	15	20	-	3	3
V.I.	-	-	-	-	-	-	-	-	31	-	-	-	-	-	1
Amer. Samoa	-	-	-	-	-	1	2	-	3	-	-	-	-	-	-
C.N.M.I.	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable ¹International ²Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 19, 1988 and November 21, 1987 (46th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- ræmia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	35,679	31,323	307	18,719	18,853	169	345	501	3,837
NEW ENGLAND	1,055	570	24	490	567	4	35	12	15
Maine	12	1	4	22	22	-	-	-	1
N.H.	6	3	5	9	18	-	-	-	5
Vt.	3	4	2	4	14	-	1	-	-
Mass.	391	269	10	287	312	3	21	7	-
R.I.	30	11	-	39	58	-	6	2	-
Conn.	613	282	3	129	143	1	7	3	9
MID. ATLANTIC	8,634	5,806	46	3,829	3,423	-	67	18	449
Upstate N.Y.	525	223	22	489	452	-	13	11	43
N.Y. City	6,012	4,334	6	2,128	1,886	-	41	6	-
N.J.	983	619	3	604	596	-	11	-	14
Pa.	1,204	630	15	607	687	-	2	1	392
E.N. CENTRAL	1,037	778	45	2,090	2,101	1	33	36	138
Ohio	96	83	31	400	378	-	8	24	5
Ind.	49	54	1	215	211	-	2	2	29
Ill.	475	403	1	910	942	-	17	7	28
Mich.	389	174	12	472	483	1	4	2	34
Wis.	29	54	-	93	87	-	2	1	41
W.N. CENTRAL	213	163	43	466	550	76	4	91	417
Minn.	17	18	5	77	109	3	2	2	123
Iowa	23	26	7	51	37	-	-	-	13
Mo.	139	76	12	228	296	46	2	55	20
N. Dak.	1	1	3	15	13	1	-	-	96
S. Dak.	-	11	4	32	24	16	-	7	112
Nebr.	28	11	4	14	25	3	-	1	18
Kans.	6	20	8	49	46	7	-	26	35
S. ATLANTIC	12,650	10,792	19	3,986	4,019	5	39	197	1,317
Del.	91	64	1	37	38	2	-	1	56
Md.	613	556	3	379	347	-	2	22	289
D.C.	621	353	-	173	142	-	2	-	11
Va.	386	295	-	366	390	2	12	17	331
W. Va.	36	12	-	66	93	-	-	2	91
N.C.	726	650	9	446	473	-	2	107	8
S.C.	668	662	3	428	418	-	-	22	115
Ga.	2,268	1,506	-	640	711	1	7	23	270
Fla.	7,241	6,694	3	1,449	1,407	-	13	3	146
E.S. CENTRAL	1,750	1,708	23	1,517	1,697	11	3	87	274
Ky.	58	22	9	332	383	5	1	29	111
Tenn.	735	672	10	452	511	5	-	37	69
Ala.	516	450	3	485	495	-	1	10	87
Miss.	441	564	1	268	298	1	1	11	7
W.S. CENTRAL	3,897	3,933	28	2,376	2,226	53	8	135	491
Ark.	225	231	2	270	285	34	-	30	81
La.	774	730	-	308	272	-	4	2	10
Okla.	136	155	9	218	214	16	-	88	31
Tex.	2,762	2,817	17	1,582	1,474	3	4	15	369
MOUNTAIN	742	610	35	510	551	11	9	11	345
Mont.	3	9	-	31	13	-	1	6	191
Idaho	3	5	5	19	28	-	-	1	11
Wyo.	1	3	-	5	2	2	-	3	38
Colo.	97	111	3	57	140	5	3	1	28
N. Mex.	46	50	2	88	85	2	1	-	11
Ariz.	146	269	16	225	230	1	4	-	41
Utah	15	22	9	29	24	1	-	-	9
Nev.	431	142	-	56	29	-	-	-	18
PACIFIC	5,701	6,963	44	3,456	3,719	8	147	4	391
Wash.	196	143	7	204	216	1	13	1	-
Oreg.	273	269	1	132	113	1	7	-	-
Calif.	5,191	6,533	35	2,939	3,159	4	124	2	374
Alaska	14	4	-	41	56	2	-	-	17
Hawaii	27	14	1	140	175	-	3	-	-
Guam	3	2	-	21	26	-	-	-	-
P.R.	605	820	-	216	270	-	5	-	64
V.I.	1	9	-	6	2	-	-	-	-
Amer. Samoa	-	-	-	3	8	-	1	-	-
C.N.M.I.	1	-	-	17	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending
November 19, 1988 (46th Week)

Reporting Area	All Causes, By Age (Years)						PAI**	Total	Reporting Area	All Causes, By Age (Years)						PAI**	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	745	525	139	42	14	25	70		S. ATLANTIC	1,179	695	269	117	55	42	59	
Boston, Mass.	191	118	40	15	5	13	28		Atlanta, Ga.	121	65	31	17	6	2	3	
Bridgeport, Conn.	35	26	6	2	-	1	6		Baltimore, Md.	135	88	27	9	5	6	2	
Cambridge, Mass.	40	29	8	3	-	-	1		Charlotte, N.C.	85	54	16	5	4	6	13	
Fall River, Mass.	28	24	3	1	-	-	1		Jacksonville, Fla.	123	86	33	14	7	3	5	
Hartford, Conn.	46	28	9	4	5	-	2		Miami, Fla.	95	50	23	13	5	4	1	
Lowell, Mass.	27	18	8	1	-	-	2		Norfolk, Va.	82	51	17	5	3	6	7	
Lynn, Mass.	24	19	5	-	-	-	-		Richmond, Va.	95	59	20	7	3	6	8	
New Bedford, Mass.	30	24	5	1	-	-	2		Savannah, Ga.	54	37	10	6	1	4	4	
New Haven, Conn.	55	41	8	3	-	2	4		St. Petersburg, Fla.	122	87	19	9	3	4	8	
Providence, R.I.	54	44	7	2	-	2	3		Tampa, Fla.	56	37	13	4	1	1	4	
Somerville, Mass.	16	12	2	1	1	-	2		Washington, D.C.	168	68	52	26	17	4	4	
Springfield, Mass.	69	49	15	2	-	3	6		Wilmington, Del.	43	33	8	2	-	-	-	
Waterbury, Conn.	41	24	10	4	3	1	10		E.S. CENTRAL	816	527	176	62	25	26	43	
Worcester, Mass.	69	69	13	3	-	4	10		Birmingham, Ala.	112	57	31	10	5	9	-	
MID. ATLANTIC	2,720	1,796	535	257	68	62	124		Chattanooga, Tenn.	73	48	15	5	3	2	5	
Albany, N.Y.	58	45	7	3	-	3	1		Knoxville, Tenn.	66	42	18	4	4	-	3	
Allentown, Pa.	27	20	6	2	1	-	4		Louisville, Ky.	143	107	22	8	3	3	8	
Buffalo, N.Y.	100	71	20	4	2	3	7		Memphis, Tenn.	200	137	35	16	7	5	17	
Camden, N.J.	34	22	9	2	-	1	-		Mobile, Ala.	48	29	12	6	-	1	3	
Elizabeth, N.J.	24	19	4	1	-	-	1		Montgomery, Ala.	51	35	9	2	1	4	3	
Erie, Pa.†	48	35	10	1	2	-	5		Nashville, Tenn.	121	72	34	11	2	2	4	
Jersey City, N.J.	63	37	14	7	2	3	2		W.S. CENTRAL	1,690	1,075	353	151	62	49	64	
N.Y. City, N.Y.	1,445	947	286	158	37	17	63		Austin, Tex.‡	57	36	13	7	1	-	2	
Newark, N.J.	105	42	26	26	4	7	6		Baton Rouge, La.	39	29	6	2	2	-	4	
Petersen, N.J.	30	15	10	3	1	3	3		Corpus Christi, Tex.‡	48	37	10	1	-	-	1	
Philadelphia, Pa.	297	172	74	32	13	14	7		Dallas, Tex.	189	123	36	15	9	6	6	
Pittsburgh, Pa.†	94	71	14	6	1	2	5		El Paso, Tex.	57	32	14	7	2	2	5	
Reading, Pa.	36	24	8	3	1	-	3		Fort Worth, Tex.	97	64	17	7	7	2	10	
Rochester, N.Y.	137	103	26	6	-	3	8		Houston, Tex.‡	734	436	189	89	24	16	18	
Schenectady, N.Y.	27	24	3	-	-	-	2		Little Rock, Ark.	79	55	14	6	1	3	7	
Scranton, Pa.†	33	28	3	1	1	-	2		New Orleans, La.	114	64	21	10	8	11	-	
Syracuse, N.Y.	53	37	7	6	1	2	5		San Antonio, Tex.	151	105	30	4	6	6	4	
Trenton, N.J.	53	40	6	3	-	4	1		Shreveport, La.	39	33	4	-	1	1	2	
Utica, N.Y.	18	12	1	3	2	-	1		Tulsa, Okla.	86	61	19	3	1	2	5	
Yonkers, N.Y.	32	28	2	2	-	-	3		MOUNTAIN	767	502	134	73	28	29	40	
E.N. CENTRAL	2,496	1,646	507	169	73	99	112		Albuquerque, N. Mex.	80	43	14	13	6	4	4	
Akron, Ohio	89	63	14	5	2	5	4		Colo. Springs, Colo.	62	43	8	8	1	2	4	
Canton, Ohio	28	20	6	2	1	-	4		Denver, Colo.	131	99	18	12	1	1	5	
Chicago, Ill.‡	564	362	125	45	10	22	16		Las Vegas, Nev.	123	79	23	14	5	2	10	
Cincinnati, Ohio	110	75	21	5	6	3	17		Ogden, Utah	22	16	4	-	1	1	1	
Cleveland, Ohio	180	104	47	13	4	12	1		Phoenix, Ariz.	191	108	41	17	10	14	10	
Columbus, Ohio	154	93	27	17	8	9	4		Pueblo, Colo.	19	16	3	-	-	-	-	
Dayton, Ohio	144	97	30	10	3	4	7		Salt Lake City, Utah	40	24	7	6	1	2	2	
Detroit, Mich.	320	178	75	28	24	15	6		Tucson, Ariz.	99	74	16	3	3	3	4	
Evanston, Ind.	49	31	14	3	-	1	2		PACIFIC	1,905	1,264	332	187	58	60	117	
Fort Wayne, Ind.	70	54	7	4	3	2	3		Berkeley, Calif.	29	20	5	-	1	3	2	
Gary, Ind.	20	12	5	1	2	-	2		Fresno, Calif.	75	41	15	10	6	3	9	
Grand Rapids, Mich.	66	53	7	3	1	2	3		Glendale, Calif.‡	19	16	3	-	-	-	-	
Indianapolis, Ind.	172	101	53	8	1	9	5		Honolulu, Hawaii	85	53	17	5	2	8	8	
Madison, Wis.	37	29	3	3	-	2	5		Long Beach, Calif.	80	56	15	6	-	3	11	
Milwaukee, Wis.	148	112	25	7	1	3	13		Los Angeles, Calif.	459	302	76	50	22	5	18	
Peoria, Ill.	62	48	7	2	3	2	5		Oakland, Calif.‡	71	46	13	8	2	2	3	
Rockford, Ill.	47	35	3	5	1	3	6		Pasadena, Calif.	31	22	6	1	1	1	2	
South Bend, Ind.	42	35	7	-	-	-	1		Portland, Oreg.	99	74	11	7	3	4	6	
Toledo, Ohio	121	88	21	8	-	3	11		Sacramento, Calif.	182	123	32	15	5	7	20	
Youngstown, Ohio	73	60	10	-	1	2	1		San Diego, Calif.	121	78	23	12	4	4	9	
W.N. CENTRAL	831	571	166	80	21	23	42		San Francisco, Calif.	150	117	33	36	-	5	4	
Des Moines, Iowa	73	54	10	6	1	2	3		San Jose, Calif.	172	108	33	16	9	6	16	
Duluth, Minn.	24	16	7	1	-	1	3		Seattle, Wash.	194	132	40	13	2	7	-	
Kansas City, Kans.	44	33	8	2	-	1	3		Spokane, Wash.	46	40	4	2	-	-	7	
Kansas City, Mo.	125	70	30	14	4	7	12		Tacoma, Wash.	52	36	6	7	1	2	4	
Lincoln, Nebr.	35	26	5	2	1	1	1		TOTAL	13,149††	8,601	2,611	1,108	404	415	671	
Minneapolis, Minn.	175	111	43	9	6	6	9										
Omaha, Nebr.	85	56	24	4	1	-	7										
St. Louis, Mo.‡	142	103	20	10	4	5	1										
St. Paul, Minn.	57	48	5	2	2	-	1										
Wichita, Kans.‡	71	54	14	1	1	1	3										

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fatal deaths are not included.

**Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week.

Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

‡Data not available. Figures are estimates based on average of past available 4 weeks.

Influenza Immunization — Continued
Current Trends

**Abortion Surveillance: Preliminary Analysis —
United States, 1984, 1985**

The total number of legal abortions reported to CDC from the 50 states and the District of Columbia was 1,333,521 in 1984 and 1,328,570 in 1985 (Table 1). The number of abortions reported for 1984 was approximately 5% higher than the number reported for 1983, whereas virtually no change occurred in the number reported between 1984 and 1985 (<1% decrease between 1984 and 1985).

In 1984, the national abortion ratio was 364.1 legal abortions per 1000 live births (Table 1). The ratio was 353.8 in 1985. The national abortion rate (number of legal abortions per 1000 women 15–44 years of age) was 24 for both 1984 and 1985, a figure essentially unchanged since 1980.

As in previous years, women obtaining abortions in 1984 and 1985 tended to be young, white, and unmarried and to have had no live births (Table 1). In 1985, 61.0% of women obtaining legal abortions were <25 years of age, 66.6% were white, 80.7% were unmarried, and 56.6% had had no live births. Comparable figures were also reported for 1984.

Curettage (suction curettage and sharp curettage) continued to be the primary method of abortion and accounted for 96.6% and 97.8% of all abortion procedures in 1984 and 1985, respectively. The remaining abortions were performed by intrauterine instillation, hysterotomy/hysterectomy, and other procedures. In both 1984 and 1985, as in previous years, approximately half of the legal abortions were performed in the first 8 weeks of gestation, and nearly 90% in the first 12 weeks of gestation.

Reported by: Pregnancy Epidemiology Br and Research and Statistics Br, Div of Reproductive Health, Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: CDC initiated national abortion surveillance in 1969. Between 1969 and 1982, the reported number of women obtaining abortions increased yearly. However, the annual percentage increase in numbers of abortions declined continuously between 1976 and 1982, from 9.2% for 1976–1977 to 0.2% for 1981–1982. Since 1980, the abortion numbers, ratios, and rates appear to be relatively stable, with minor year-to-year fluctuations.

Twenty-eight of the 52 reporting areas reported more abortions for 1984 than for 1983 (average increase of 8.9%); the remaining areas reported fewer (average decrease of 10.9%). Twenty-two of the areas reported more abortions in 1985 than in 1984 (average increase of 4.6%); the remaining 30 areas reported fewer (average decrease 5.2%).

Because of annual variation in the number of states reporting data to CDC on specific characteristics of women obtaining abortions, temporal trends based on these summary data should be viewed with caution.

Abortion Surveillance — Continued

TABLE 1. Characteristics of women obtaining abortions, by selected years — United States, 1972–1985

Characteristics	1972	1976	1980	1981	1982	1983	1984	1985
Reported no. of legal abortions	586,760	988,267	1,297,606	1,300,760	1,303,980	1,268,987	1,333,521	1,328,570
Ratio*	180.1	312.0	359.2	358.4	354.3	348.7	364.1	353.8
Rate†	13	21	25	24	24	23	24	24
Percentage distribution‡								
Age (yrs)								
≤19	32.6	32.1	29.2	28.0	27.1	27.1	26.2	26.3
20–24	32.5	33.3	35.5	35.3	35.1	34.7	35.3	34.7
≥25	34.9	34.6	35.3	36.7	37.8	38.2	38.5	39.0
Race								
White	77.0	66.6	69.9	69.9	68.5	67.6	67.4	66.6
Black and other	23.0	33.4	30.1	30.1	31.5	32.4	32.6	33.4
Marital status								
Married	29.7	24.6	23.1	22.1	22.0	21.4	20.8	19.3
Unmarried	70.3	75.4	76.9	77.9	78.0	78.6	79.2	80.7
No. live births‡								
0	49.4	47.7	58.4	58.3	57.8	57.1	56.9	56.6
1	18.2	20.7	19.5	19.7	20.3	20.7	20.9	21.3
2	13.3	15.4	13.7	13.7	13.9	14.2	14.4	14.5
3	8.7	8.3	5.3	5.3	5.1	5.2	5.1	5.1
≥4	10.4	7.9	3.2	3.0	2.9	2.8	2.7	2.5
Type procedure								
Curettage	88.6	92.8	95.5	96.1	96.4	96.8	96.6	97.8
Suction	65.2	82.6	89.8	90.4	90.6	91.1	92.8	92.9
Sharp	23.4	10.2	5.7	5.7	5.8	5.7	3.8	5.0
Intrauterine instillation	10.4	6.0	3.1	2.8	2.5	2.1	2.0	1.5
Hysterotomy/hysterectomy	0.6	0.2	0.1	0.1	0.0**	0.0**	0.0**	0.0**
Other	0.5	0.9	1.3	1.0	1.0	1.1	1.4	0.7
Weeks gestation								
≤8	34.0	47.0	51.7	51.2	50.6	49.7	49.7	50.8
9–10	30.7	28.0	26.2	26.8	26.7	26.8	26.8	26.2
11–12	17.5	14.4	12.2	12.1	12.4	12.8	12.9	12.3
13–15	8.4	4.5	5.2	5.2	5.3	5.8	5.9	5.9
16–20	8.2	5.1	3.9	3.7	3.9	3.9	3.9	3.9
≥21	1.3	0.9	0.9	1.0	1.1	1.0	0.8	0.8

*Abortions per 1000 live births.

†Abortions per 1000 women 15–44 years of age.

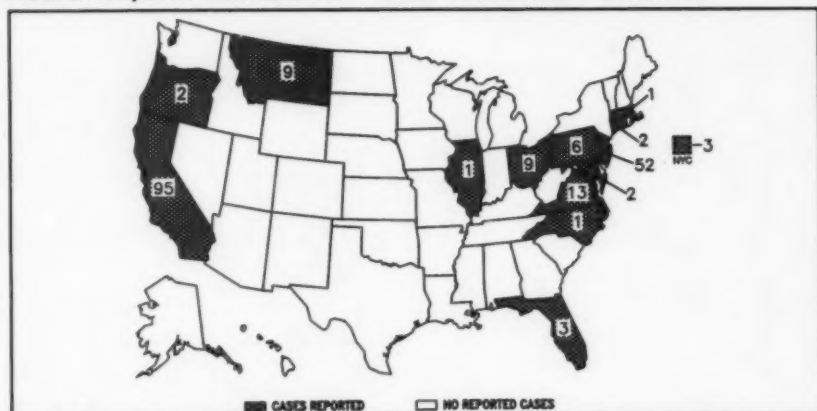
‡Excludes unknowns. Because the number of states reporting each characteristic varies from year to year, temporal comparisons should be made with caution.

§For 1972 and 1976, data indicate number of living children.

**<0.05%.



FIGURE I. Reported measles cases – United States, Weeks 42–45, 1988



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